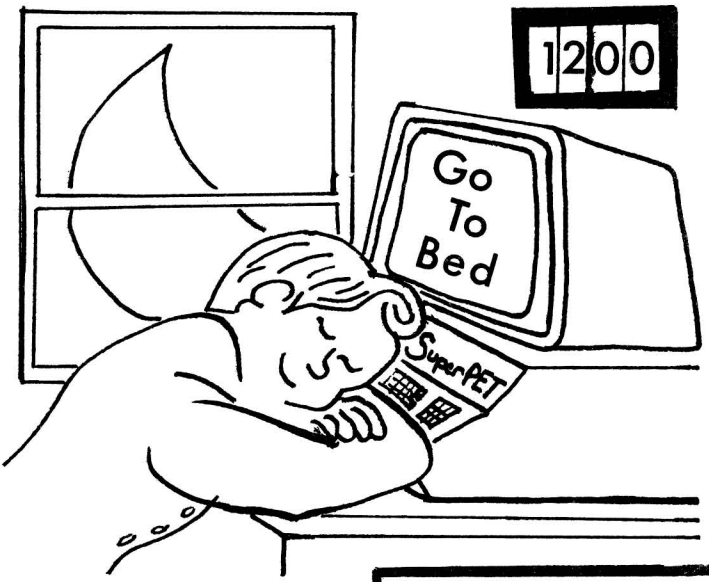
MIDNITE SOFTWARE GAZETTE



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EDITORS:
Jim & Ellen Strasma
P.O. Box 647
Pawnee IL 62558
217/625-7494

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CENTRAL ILLINOIS
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c/o Jim Oldfield
635 Maple
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217/864-5320

ATUG Disk Exchange:
c/o Brent Anderson
200 S. Century
Rantoul IL 61866
217/893-4577

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MIDNITE MEANDERINGS

CIPUG contributors for this issue are Brent Anderson (BA), Mark Niggeman (MN), John O'Hare (JOH), Jim Oldfield (JO), Jeff Porter (JP), Jim (JS) & Ellen (ES) Strasma, & (indirectly) Monty Throneberg (MT). We also thank all whose names appear beside their comments & reviews for their help in making this 6th issue.

For those of you who subscribe to The Source, good news! Midnite has been placed on The Source by The Source PET User's Group. Please address Source mail for CIPUG to JOH at TCY 946 (PETMAN). Thank you, Source PET User's Group! Users, do you like what you see?-ES

Reader Roy Merme, in the midst of praising the Midnite, suggested it should be expanded to appear more often. He got me to thinking...

There is terrific commercial potential in what we're doing. A sister Apple review magazine started the same month as Midnite, is up to 2ØØ pages/month, chock full of ads, & was, until this month, absolutely free. That kind of growth takes money & paid staff; until someone provides that, we'll continue as a quarterly independent. But Roy has raised a good point. Companies realize no one handles Commodore reviews as well or quickly as we do (I'm humble, right?), though some may be upset because we've burned their tails. But we could hire someone to make Midnite into what Roy requests.

I've talked to Commodore staffers about this. The new Commodore magazine is getting quite good, but there is still a need for independent support of Commodore products. Unless you help The PET Paper survive, & unless another PET source changes its plans, Midnite could soon become the only independent national PET newsletter.

Why is this so bad? We were recently asked by a seller of PET products for a list of U.S. Pet User Groups. To date, we know of 28. To get even that much information, we were the only source. The list in the current (12/81) Commodore magazine is 3 years out of date--we are listed under the former address of our founder, who moved out of Illinois that long ago; at least 1 person on the list is dead.

If you have ideas about how the Midnite can grow to serve PET users better, we'd like to hear from you. As you ponder, bear in mind: none of the bigger magazines want to absorb us (we checked), none of us want to work any harder unless we start getting paid, & some of us (namely me) wouldn't work harder even if we were paid.-JS

ATTENTION COMPANIES: You may now kill 2+ birds with 1 stone. JS is now a product reviewer for Micro magazine. On request, your product may now be reviewed for both Micro & Midnite. Micro focuses on advanced products, such as machine-language programs & add-on hardware; they will not accept games for review. Midnight will review most anything. Recently, we have noticed that the companies with VERY expensive programs (BPI, LTA, MAS, MARI, Silicon Office, The Manager, CMS's GAS, Info-Designs 2ØØ1, Request,etc.) rarely send them out for

review. Anyone who pays more than a day's pay for a program, without seeing it reviewed, deserves what they get! For the record, sending us a demo disk & info packet doesn't count. We only review actual products, which will be returned upon request.-JS

LATEST COMMODORE HOTLINE (oops!)...LATEST COMMODORE NEWS

According to the latest issue of Commodore magazine, the Commodore Hotline recently handled 2000 calls a month. Since that was apparently more customer support than King of Prussia had in mind, the call is now on you. Address your no longer toll-free calls to: 215/337-7100 or 215/337-1603. (Apple cancelled their toll-free hotline, too.)

About the "Late Great Commodore" editorial in the last PET Paper...Commodore isn't half as late as the latest issue of The PET Paper! The fact that nearly everything Commodore promised to bring out this year is in fact working & being delivered by year's end, with manuals, says a lot. For instance, the new 8023P printer, is a real competitor to the Epson MX-100 in features (fewer character sets & 1 less dot in the matrix, but twice as fast, & easier to adapt to friction-feed.) & wonder of wonders, it was in stock at my local dealer's WITH a manual precisely when Commodore told me it would be. The same was true of the new 8300P printer, the SuperPET, & most other products announced at NCC last May. Only the 8033 Color Computer (a publicity stunt?) & the new super disks have yet to appear. Dealers seem thrilled with the VIC, & our new dealer in Springfield is having trouble keeping CBM equipment in stock. Any 22 year old electronics company has to be doing something right!

Working on the Osborne PET Personal/CBM Professional Computer Guides has made us realize that Commodore's computer equipment can do more than anything from competitors not even close to its price range. And finally, there is now a wide range of top-quality software available directly through Commodore. Some of this, notably the 8096 version of VISICALC, & the DTL BASIC compiler is better than anything comparable available for Apple, Atari, etc. IBM may win big in the end, but it will be a while before your local dealer has any to sell, & longer before you can get the dollar value out of IBM that you do now out of Commodore. In short, I'd rather have Commodore stock right now than Apple stock...

NEW VIC LINE: Now that the products from NCC '81 are here, what's next? Last week, Commodore stunned everyone with an expanded VIC line. Most exciting to some within Commodore is the $150 membrane keyboard VIC 10. It is the same price as the Sinclair ZX-81 & is to the VIC 20 what the ATARI 400 is to the 800. Next is the 40 column display VIC-40. (Expect upgrades of existing 20's to 40 columns.) Let's hope the screen format will be software selectable. Then there is the Cadillac of the VIC line, the VIC-64, said to have 64K RAM standard & equal Apple II in features for $595 (1/3 Apple's price).

STILL-TO-COME DISK DRIVES: Shown again were 1) the 8250 2-megabyte DUAL DISK DRIVE (its SuperDOS is now called 3.0, not 2.7; first deliveries are expected in April), & 2) the MINNIE WINNIE WINCHESTER TECHNOLOGY HARD DISK DRIVES (no longer boxed with an 8250 drive, but in their own cabinets: the $3000 version has 5 megabytes useful capacity, while the $3500 version has 7.5 megs). Unfortunately, like most Minnie Winnies now being announced, they offer no realistic backup for data. Consider the speed of Commodore's UNIT TO UNIT program. At 1 hour per megabyte, who will ever back up a 7.5 meg disk? That, in turn, guarantees loss of data. Fortunately, since the IEEE handshake in DOS 3.0 will be optional, vastly faster data transfers are possible if someone writes suitable software. One great feature of the MINNIE WINNIES & 8250, compared to other new hard disks, is that the ENTIRE drive can be treated as a single file. Imagine having 30,000

252-byte relative records on line at once in a single file! I've heard from several dealers who need a database manager that can handle LARGE records and LOTs of them. Looks like relief is just around the corner.

NEW SOFTWARE PACKAGES: SuperPET COBAL is expected this Spring, with (extra cost) BASIC & FORTRAN compilers this summer. For the 8096 expansion memory board, WORDPRO 5+ is coming, VISICALC 8096 is already unofficially available, a new OZZ called Silicon Office is coming, UCSD Pascal is rumoured, & various other packages are likely. Which model to get? For educational uses, Commodore recommends the SuperPET. For business, they plan to support the 8096.

APPLE EMULATOR: But I've saved the best for last... at the same show that saw the new VICs unveiled, a mysterious EMULATOR was also discussed. For at least a year, Commodore has had a machine to emulate the Apple II, & now they're going to sell it. Pity that Apple went to so much trouble to extend the addressing on the Apple III--the new Commodore machine is said to have 128 or 256K standard, using a new 6509 processor. It will have a back slot that accepts one of several processor chips, including the Z-80 & the 8088. The resulting combinations will supposedly run stock CP/M, IBM Personal Computer, Apple & TRS-80 disk programs. According to Wall Street Journal, everyone expected the Japanese to develop this kind of machine--next year. Apple stock fell $2 a share the day of the show. Commodore doesn't claim the VIC-64 will load Apple programs or Z-80 programs, but it will also have a slot for exchanging processors & will run Applesoft when typed in at the keyboard. The EMULATOR, on the other hand, is disk- & program-compatible with all competitors.

COMMODORE PHILOSOPHY: The new equipment says a great deal about Commodore's corporate philosophy. They are not pioneers, but optimizers, developing existing products to a peak of sophistication. Like the Japanese, they are willing to copy, & hence will be with us a long time. Commodore's chief executive, Jack Tramiel, summed it up: "We're the American Japanese...We don't want to invent anything; we just want to make sure we have the best." (WSJ, week of 1/3/82).

SOFTBOX SB-80: Does anyone know whatever happened to the SOFTBOX in the U.S.? The developers, Lifeboat Associates, ignore my letters & don't return my calls, but the product now seems to be on sale in Europe. It simply turned the PET into an intelligent terminal from a separate, included computer, but it is surprising that it would disappear without a trace here & still be for sale overseas. In any case, if you want CP/M, the EMULATOR looks like it will take care of your needs, supposedly by 9/82.

COMPETITOR'S NOTES

I had an interesting phone call Thursday from Hal Hardenbergh, of DTACK Grounded, who filled me in on Radio Shack news. They have just announced a $1500 add-on 68000 processor to their TRS-80 Model II ($5000 complete). The big news: it will keep its Z-80, for keyboard scanning, input, output, etc, which keeps speed down (Hal predicts a 4 megahertz clock), but allows software compatibility with existing products. PET & Apple II owners can have their own 68000 models too. His Digital Acoustics is shipping both models, for way under $1500. His address made the resource list this issue!

Hal had some thoughts worth sharing: 1) The Apple III is dead. It was already dead before the TRS-80 announcement, but the 68000 board for Tandy will tamp the earth over its grave. 2) The Z8000 processor chip is also dead, for lack of a second source, among other problems. 3) The new Xerox microcomputer is also dead in the wake of Tandy's announcement. (I didn't quite catch why on this

one, but it does seem to be an also-ran to IBM in the same high end market.)

I received independent confirmation on the "death" of the Apple III today from a nationally-known Apple expert. Apple's future hopes appear to rest on 2-3 as-yet widely rumoured but unannounced models. With products like Commodore's emulator & VIC-64 nipping at one leg, & IBM nipping at the other, they'd better be good, & they'd better appear this year.

Hal's QUOTEABLE QUOTE from Dtack Grounded: "The Apple III is not selling well enough to justify the book value as a computer. It is also too stiff for a hula hoop & too light for a boat anchor."

A classic battle is shaping up now, between machines stressing compatibility with existing software, & those stressing peak performance. Compatibility is stressed by IBM's new PC, with CP/M & 8088 processor. The performance team is headed by Tandy, with a 68000 processor version of the TRS-80 Model II. Apple is also said to be working on a 68000-based computer. The 68000 will run BIG circles around the 8088, but 68000 users will have to wait a while for programs like WORDPRO or VISICALC.

MT reports the resale value of an 8050 disk is about zilch, & wonders if anyone would like six? (Contact him at 201 N. Poplar, Assumption IL 62410)

Just in: MTU's new microcomputer. MT got one last week; we'll try to have a review of this "Cadillac of 6502 systems" next issue. So far he's pleased.

VICTOR/SIRIUS I: Today's mail also brought the official announcement of Chuck Peddle's new brain child. Peddle was the father of both the 6502 processor & the PET computer. His able assistant, Bill Seiler, designed the 8032 & authored several of the best PET utility programs. Therefore, their new product is of more than passing interest to PET owners... In the U.S., it will be known as Victor, in honor of the company paying Peddle to develop it. In Europe, it is known by its corporate name, Sirius, after Sirius Systems Technology, Peddle's new company. The new computer kindly includes an IEEE-488 port (perhaps to run the flocks of PET computers adorning the Sirius factory?), 2 fully programmable RS232 ports, 400x800 dot graphics, fully programmable character sets on a 9x12 dot screen matrix, & keeps all software on its 1.2 megabyte built-in disks. This makes swapping languages & disk operating systems or fixing bugs quite simple compared to ROM software. Standard software includes CP/M-86, Microsoft's IBM DOS, & nearly everything that will run on either. It appears to "carbon copy" the IBM, with better keyboard layout. Both run the same software & cost about the same, but Peddle's machine looks about a year ahead in features. IBM will still succeed with their machine, if only on the strength of their name & software backing, but Peddle's new effort also looks like a winner.

Does anybody remember the Quasar pocket computer that was supposed to wipe everyone else out of the water a year ago? Supposedly, it's finally making it to market. But if you want it to do much, it won't fit in your pocket. A useful version looks more the size of the Osborne 1, which is also out, & selling well . If only the Osborne machine had an 80 column display!-JS

COPYRIGHT NOTES

ETHICAL QUESTION: When it becomes impossible to purchase from the copyright holder, due to the coming & going of companies, is it kosher to make copies of that software or buy them? ...Seems a shame that good software should die with the passing of its author's company, but since copying probably had some part in

its demise, it seems to be rubbing salt in the wound to do so after the fact.-Candy Jens, 2166 Allenwood Rd., Wall NY 07719

REPLY: According to lawyer friend, Jim Sutton, a copyright does not mean users can't copy your program. It merely means they must pay you for the privilege. Therefore, the question is not whether you can copy software, but rather, at what cost? When a company sells an author's program, the copyright is often kept by the author. If the marketter folds, the author may make other arrangements. If it is the copyright holder who dies, program rights go to the heirs.

1) A recent example was the death of Programma International, who sold the favorably reviewed TALKING CALCULATOR. Although I don't have the author's address, I do have some money for him, from a user who got a copy after Programma folded. I assume the correct fee is what Programma used to charge, but this may not always be true.
Hint for authors: Include your name & address in your program listing & instructions. Then if your seller folds, you may still receive copy fees from honest users.

2) A final example: Gorden Hoch, one of our avid readers, recently died. He was the author of an excellent program called BEAMS, used in calculating various parameters of steel beams for structural engineers (NOT the same as the one of the same name from FLC, Inc.). His widow has graciously agreed to place Gordon's BEAMS program in the Public Domain. Any user group may obtain a copy by sending either a 4040 formatted diskette with a reusable mailer & return postage, or $10 to me.

MORE COPYRIGHT ISSUES:
1) Recent court cases seem to have decided that a program which does not claim to be copyrighted is not copyrighted. Thus, PROCEP EDITOR, which came to me from 3 different sources, appears to be Public Domain, since none of the copies I received, nor its instructions & demo, bear any copyright notice. On the other hand, if copyright notices were present but removed by others...

2) Publication of a program in a magazine does not make it Public Domain. Rather, it is one way of proving copyright. Copying of magazine programs is widespread, but only legal among those who have purchased the magazine issue containing the copied program. I've never heard of anyone suing individuals for trading programs from magazine articles. But software houses who use magazine software in commercial programs without permission are taking a foolish risk.

3) Authors who don't want their magazine programs bound by copyright may release the program to a user group or a non-copyrighted publication before publishing it in a copyrighted form. Some PET authors do this regularly.

4) Companies which want copyrighted products respected by users had best offer them for sale. For instance, Personal Software has long slighted PET in their software offerings. But if they don't put an 8096 version of VISICALC on the market soon, everyone will already have it! The programs making the rounds of the user groups the fastest are those which cannot be obtained any other way.

5) CMD struck sore nerves in the U.S. PET community, by trying to copy-protect & license user programs compiled with their compiler. The gist of the objection as I heard it, is that it amounts to taking credit for thousands of programs CMD didn't write. As a result, some users feel justified in trying to disable the run-time dongle. This is probably a case where CMD was legally right, but tactically wrong. Oxford computer systems is trumpeting in British

ads the fact that their competing compiler, "PETSpeed", uses no run-time dongle. Meanwhile users, before giving away a DTL-compiled program to all your friends, reread the license agreement CMD says you accepted by not returning their product for a refund.

6) Now gaze into our crystal ball to look at copyright issues yet to come: we should soon see the first "foreign DOS" for PET, meaning that the OZZ people have figured out a way to reprogram the CBM disk inner processor to alter the way data is stored on the disk surface. When that happens, other software houses will try to do likewise. If they succeed, shortly thereafter, a bit copier program will also appear, making all their efforts for naught. How do I know these things? I watched it happen on the Apple II. The whole thing bears a remarkable resemblance to the nuclear arms race.

What is the meaning of it all? Nothing new really; it's the old issue of free traders vs. protectionists. They've fought for several hundred years now, & won't stop anytime soon. But if I learned anything from a semester studying the European Economic Community in Brussels, Belgium, it was this: the advantages of protectionism are short-run, while those of free trade are long term.-JS

MONOPOLY: (This is NOT a GAME): I'm sure you've seen ATARI's (tm & Warner Communications Co.) announcement by now in recent computer magazines. What have been the reactions so far? It's deleting some programs from the market that belong to us. And it worries me, not because I've written programs similiar to theirs (I've never been accused of being a programmer), but because I can foresee buying my software from only one source. For a personal computer consumer, this is not good. I am not against ATARI(tm) making money. I own one of their Video Systems myself. I know it costs them money to keep their programmers writing games for their arcades & computers. They need a profit from game development or they wouldn't be in business. And they're very much in business. With their resources, what would keep them from owning every version on every computer of every game they've designed, whether legal or not? Who wrote the first WUMPUS, the first STAR TREK, the first ADVENTURE, the first GAME? Are they also entitled to register with the Library of Congress each idea for each game written to date? I'm not a lawyer, but I do know that it' s illegal to copy a program except for back-up purposes for your own system. And school systems have problems with the number of copies of a single program that they can have. So why do I write this when I don't know whether ATARI's (tm) actions are legitiment or not? Because I fear for what could be down the road.-JO

BUTTERFIELD ON PIRACY (Is this the last word? Father knows best...): "It's well to see users speak out, whether or not you agree with them. Should software prices be based on usage? How would you administer it? How does the poor user/victim find out about mediocre stuff other than getting bitten? Wouldn't it be nice if more software houses allowed "trading up" to more recent packages? I think my own measure of worthiness is: if it's mediocre, I'd rather write it myself & know what I've got. If I can't write it myself, or don't want to take the trouble, then I should pay for it. But it should be accessible code--I will likely want to modify, upgrade or whatever. Why cheat? If you can't afford it, you should't have it, or you should do it yourself...the rationale that it's OK to steal if the item is overpriced doesn't work on fur coats or Cadillacs. But people view morality differently with software. If you steal a car, the owner is out one car. If you steal a program, the owner still has it. It seems more acceptable to channel your theft that way.

Maybe we are using terminology wrongly. Is it theft when you sneak into a movie without paying? Probably not: but it's still cheating. I think we may be better off when we start viewing software as a service rather than a product. You buy the service, not the tape, disk or chip; & if software houses were more

visible in terms of service, support, documentation, upgrades & warranty, we might understand better what we're paying for.

Most users pay; few cheat. Some users pay & than discover that what they have bought is worthless. Let's not forget: ripoffs can work both ways, & it's not just users who are rippers and vendors who are rippees. We need MSG to warn of problems in products. Two wrongs don't make a right & it's no excuse to violate a vendor because you once had a bad experience with software.

Take a look at industry prices & you'll quickly see what a bargain micro programs really are. We need those package programmers out there; let's try to treat them right.-Jim Butterfield

PET PROGRAMMING NOTES

WORD-PRO EXTENSIONS: Jim Halsey of EXECOM Corp., makers of the new 80 column board for 9" screen PETs, sent a good article on adding a QUIT feature, & sequential output/display feature to WORD PRO 3. Since Midnite, doesn't publish articles, we're sending it to The PET Paper. Meanwhile, anyone can get the changes by sending EXECOM your copy of WORD PRO 3 & $5 for handling.-JS

3 HINTS FOR those with 12" SCREENS (Places to put utilities like MICROMON or POWER-AID):

1) If you ground pin 20 on the J4 memory expansion connector, the standard ROM set is disabled, allowing you to have other ROM or RAM chips at the same addresses in spite of the originals' being soldered in.

2) You may replace the 2K ROM in socket UD7 with a 4K 2532 EPROM. 256 bytes of added memory are taken by PET's I/O routines, regardless of ROM contents, but nearly 2K of memory is yours. I keep POWER-AID in such a ROM, starting at $E900, making it easily usable with sys59648.

3) 48 unused locations are found in screen memory at the end of your screen, but don't appear on the screen. Use 34768+ to hide a small routine.

9" SCREEN PETs: If you want to keep BASIC 4.0 machines with 9" screens from flashing the EOI line (as in BASIC 2.0), change:

```
e3e5 a9 32 to a9 3c
e37d likewise
```

To kill the AUTO-INITIALIZATION feature on a 4040 disk drive, use:

```
"m-w"chr$(243)chr$(16)chr$(1)chr$(1)
```

WANT ADS & ANSWERS

WANTED: Reviews or review copies of BUSINESS or EDUCATION packages & programs. Will return review copies if requested. Users, how about music or scientific programs, & kindergarten level (reading readiness) programs?-ES

WANTED: Information on which DATA BASE PROGRAMS:

1) can completely fill an 8050 disk with data, & accepts records longer than 255 bytes in length.-Computer Country of Springfield

[OZZ can now, & JINSAM may when the new SuperDOS 3.0 is finally released.-E&JS]

2) can provide QUICK, CHEAP way to fill out specialized MEDICAID insurance form for medical office. Will MARI or MAS do it, or something simpler?-ES

WANTED: directions for Graphic '80 CONVERSIONS, 40- to 80-column screen conversions & vice-versa, etc.-many users

Dear PET and VIC Owners: **$6.00 Software!!**

For $6.00 and a small favor, we would like to sell you a copy of a very neat CURSOR SCROLLING PROGRAM that we have developed.

First let me describe the cursor scrolling program. This program provides the capability to scroll forward and backward thru a BASIC program using the cursor up (CU) and cursor down (CD) keys. For example, cursor to the top of the screen, press cursor up and the screen will "reverse scroll" with the top line displaying the previous BASIC line. Auto-repeat is enabled on all keys and you can simply hold down the CU key to continuously scroll backwards thru the file until you remove your finger from the key or you reach the start of your program. Similarly, you can cursor to the bottom of the screen and scroll forward thru your BASIC program until the end. As you can see, the scroll program makes browsing through and locating those bugs a breeze.

Now you're wanting to know "what is the small favor?" - Right? The small favor we're wanting is some free advertising and you can help. Did you know that a full-page advertisement in BYTE magazine costs almost five-thousand dollars - and that is just for one appearance? Kilobaud, Creative Computing, Compute, and Micro cost a lot also! How can anyone sell inexpensively priced software with such high advertising costs? Now don't get us wrong, advertising in magazines is useful and has its place. You'll note that Eastern House advertises a lot. But advertising is by far our greatest expense. So, we're trying an experiment and, with your help, maybe we can change the way software is sold. If we can reach the PET community at minimal cost, the savings can be passed on to you. This technique just may be the solution to software piracy - that is, who would want to steal from some poor programmer at this small price! Thanks for your time and lets all work togther - Carl Moser, EHS.

To order the cursor scroll program:

1-) Make 5 copies (or more) of this letter.
2-) Send all but one copy to other PET owners (free advertising) who might like to purchase this program. Examples: Friends, computer club members, and magazine article authors.
3-) Use last copy as your order form for ordering the cursor scroll program.

Scroll Order Information

Circle per you computer:

PET 2001 -8K, -16K, -32K (3.0 Roms, 4.0 Roms, or Original Roms)
PET 4001 -8K, -16K, -32K (4.0 Roms) (9-inch or 12-inch screen)
CBM 8032 (80 column PET)
VIC (NOTE: VIC and Original Rom version available Nov. 1981.)

Price: $6.00 on cassette, $9.00 on diskette
(Postpaid in U.S. and Canada - Add $3 for overseas airmail)

Name: _____

Address: _____

City/State/Zip: _____

Would you like to see other offers like this: YES NO

Eastern House Software
3239 Linda Dr. Winston-Salem, N.C. 27106
(919) 924-2889
(919) 748-8446
U.S.A.

Two Answers:

1) TPUG's TORPET newsletter (10/81 issue) published details on turning a 4016 into a Graphics 80. It isn't a task for beginners.

2) Jim Russo of SEMPUG can provide a variety of 2K ROM images for UD7 on models with 12" keyboards. They include:

1) Graphics 80
2) 8032 masquerading as a 2001/B upgraded to 4.0
3) Graphics 80 masquerading as a 2001/N upgraded to 4.0
4) Fat Forty masquerading as a 2001/N upgraded to 4.0
5) Graphics 80 masquerading as a Fat Forty

His address is 1421 Pine Valley, Ann Arbor MI 48104. Write him to be sure, but recent cost was $10 per EPROM. (If you want a reply, include a stamped self-addressed envelope.)-JS

AVAILABLE: The 10/81 TORPET issue announced new ROM for the EPSON MX-80 printer, to give it a full PET GRAPHICS character set.

AVAILABLE: LVAPUG's GILA NEWSLETTER, 12/81, reports that MATOR, INC (Santa Monica CA) is selling a 10 to 45 megabyte HARD DISK UNIT for PET, using an extended DOS 2.5 & the IEEE-488 bus.

ATTENTION COMPUTE! READERS (& LAZY PROGRAMMERS): One item in each of the last two issues needs a quick comment:

1) In the Dec. issue, Hal Hardenbergh described an error in early versions BASIC AID. Anyone wanting the latest error-free BASIC AID 4.0 can get the program & source code from ATUG, TPUG in Toronto, COPUG in Columbus OH, plus others. The last few bytes of current versions are its assembly date-10/22/81. 6 versions are available: BASIC 2.0 or 4.0, CBM & ASCII printers, & 40 or 80 column screens. Other versions (Fat Forty & G80) are also accommodated in source form. ATUG also offers a shortened version by Arthur Cochrane, called POWER-AID. It contains all BASIC AID features missing in POWER, making POWER the absolute best programmer's aid available for CBM computers.-JS

2) If you don't want to type in MICROMON, from the 1/82 issue, get it & its source code from the above user groups. Arthur Cochrane & I developed the published version for ATUG from Bill Seiler's original. Again the last few bytes should give the date of assembly.-JS

MORE ANSWERS (to last issue's questions):

AB Computers carries some Nick Hampshire books, can probably special order others.-Candy Jens

On FARM SOFTWARE: Have written to Canadian university for programs offered for PET-will report when/if received. Farm Computer News vastly overpriced, on basis of sample copy received.-Candy Jens

RESET BUTTON:

1) Maybe Eclectic Software (Dallas TX, 214-358-1307), who made one for the old PET & I believe also did one for newer ones.-Candy Jens

2) If someone wants OTHER OPTIONS BESIDES the RESET button, the KRK-2 includes it, repeat keys, clicking keys, & an amplifier with music capabilities, for $120 from Microtek, Inc. (San Diego CA) Don't have this but reviewed in 8/81 Kilobaud Microcomputing, p.15.-Candy Jens

3) New 3rd edition of Osborne's CBM/PET Guides will include complete instructions for installing your own.-ES

VIDEO MONITOR for Jim Oldfield: HUH Electronics (San Mateo CA) makes Sup'R'Mod &

Video Buffer for use with monitor or TV. Also, Computer Depot (Minneapolis MN) makes Auxilliary Video to connect additional monitor(s). Addresses [see Resources] are over a year old so hope they're still valid.-Candy Jens

READERS' COMMENTS

JO pointed out the other day that he has yet to receive a letter with anything but praise for the Midnite. "It's downright embarrassing", he says. I reminded him that we probably have a few detractors who probably just haven't written us, such as companies whose products received unfavorable or inadequate reviews, the magazine that views us as a competitor, & poor readers who waited two months for me to send them requests while Ellen & I were working on the Osborne CBM & PET Guides! But having restored our humility, here's a sample of a typical letter JO was very glad to receive:

"I'm very happy that I've found a newsletter with independent reviewers. As I own nearly all programs available for PET, I very often can agree with your software review. I also just bought a program because of your review in issue 5 - DRAGON'S EYE. I must agree, it's one of the best PET programs. Because here in Europe the PET is leader on the market (over 50%!), there's a lot of excellent software available here (especially in England) that is not available in USA, I think. I've a lot of superb programs like SARGON 2, PAC-MAN, ASTEROIDS, SCRAMBLE, GALAXIANS & lots of other 'arcade-games'. If you are interested in reviews of them or an address where you can buy them, please tell me. I would like to write some reviews in WORDPRO 3+ or 4+ format for your gazette. I also could write you a little book about the behaviour of U.S. software companies. As I very often buy programs in the U.S.A., I've a lot of experience. Some companies ship very fast (AUTOMATED SIMULATIONS for example), some never answer, although I've sent money and several letters (HAYDEN & FSS software!!!)"-Fritz Schäfer, Schnackebusch 4, D-5106 Mulartshütte WEST GERMANY (ph:02408/8319)

[Anyone heard from Hayden or FSS lately? As for reviews, & software sources, YES, DO TELL US, wherever you are in the world, & WORDPRO files are ideal for our needs. Where can SARGON 2 for PET be obtained legally in the U.S or Europe?--See comparison of MICROCHESS & SARGON under Games Reviews-JS]

SOME QUOTEABLE QUOTES, from Hal Hardenbergh in Dtack Grounded:

1) "How does one write 68000 software, design not one but two 68000 attached processors, keep another business going to pay the bills & still find time to write a newsletter? Hint: this page is being written on Thanksgiving Day."

2) "We make both Commodore compatible 68000 boards & FULLY Commodore compatible boards. The FULLY compatible boards are the ones which have big holes drilled in the unpopulated RAM locations."

COMMENT ON UPGRADES:

In my change from BASIC 2.0 to BASIC 4.0, my biggest concern was that some of my favorite and/or expensive software would cost a fortune to convert to BASIC 4.0. I found that some packages like WORDPRO & VISICALC worked on both Others like AB's VISIBLE MUSIC MONITOR required only a few POKEs. Other companies upgraded my version of programs for about 10-15% of purchase price. Eastern House (MAE), IDPC (fullFORTH+), & ABACUS (VIGIL, TINY PASCAL) were all very helpful. In addition, many companies seem to now be offering newer versions of their old software to puchasers for only a small fee. Have the software producers begun to see the light? Do many of them now understand that the better the documentation & the more complete the support, the more programs they will sell?-Ralph Bressler (The PET Paper), Box 460, Livingston Manor NY 12758

DEALERS

DATACAP: "...after receiving ARROW [see review under UTILITIES], I was unable to perform any high speed functions associated with the chip. Remembering that another chip with similar cassette features required the newer type cassette deck, I decided to trade my old one. When the new deck arrived, I eagerly plugged it in & recorded a program in high speed...[unsuccessfully]. So I decided to place a call to DataCap to fine out once & for all what I was doing wrong. Mr. Milt Bathurst listened to my story & then suggested that if I was using tape that had a leader, that I run past the leader before recording. To my amazement, my program was saved.... Since [I] purchas[ed] ARROW in [5/81], Milt has made an improvement in High Speed Save by adding a 10 second header."-Pete Vandrew, 135 Cochran, Manhattan IL 60442-0374

In SPRINGFIELD, IL: Welcome to the COMPUTER COUNTRY. This St. Louis chain has just moved into our area in Springfield, & temporarily at least, their entire lineup is from Commodore. What's more, they're SELLING lots of Commodore computers. MAIN STREET COMPUTERS of Decatur, IL., praised a couple of issues back, has also just opened a Springfield branch, also selling Commodore computers.-JS

In MANHATTEN, KS: "I would also like to mention the local Commodore dealer (Bob Johnson, MIDWEST COMPUTERS, Manhatten, KS.), as he is very helpful with both hardware and software problems. He has written quite a bit of software and gives it away with hardware purchases (i.e., he furnished a modem program & enough advice to allow me to interact with the Kansas State University mainframe computer, which has half-duplex dial-in lines.)"-RTBS

SKYLES ELECTRIC WORKS. "June 1980 I bought a SKYLES ELECTRIC WORKS 8K memory-expansion board. Worked wonderfully until recently, it began to hang up my PET. Writing Skyles about their honoring TWO-YEAR GUARANTEE & some possible alterations, I received in a FEW DAYS a phone-call & letter from Bob Skyles assuring me they would. So far my dealing with Skyles has been great!"-BA.

AND THIS REFLECTION FROM A DEALER, ON ADVERTISING:
"One lesson I have learned about marketing anything to do with computers is an ad does not sell your product, but draws postcards asking for more free information. So if you ever sell a program through the magazines, sell the documentation, or add to the price to cover sending many letters out with little return."-Chet Lewis of PROGRESS COMPUTERS

USER GROUPS

"Is address for EPSON USERS GROUP correct (1017 Trollingwood Ln., Raleigh, NC 27609)? Letter I sent was returned undeliverable. I thought there may have been an error under Resources in issue#5. Thanks for your attention."-Steve Paldin(?) from SUNRISE ASTROLOGY SERVICE, 44 Rockwood St., Boston MA 02130

[Editor: Sorry, someone requested my only copy of the newsletter, & I gave it away, to parts unknown. Don't bother writing the above address. I think it was originally sent to me by Maisie Irish Cohen of MicroXchange-JS]

LAS VEGAS AREA PET USERS GROUP (LVAPUG): Contact Gerald Hasty (702/453-3544) & Jim Widener, 1700 Gateway Rd., Las Vegas NV 89115 (702/452-7032). "Non-profit organization formed in June 1979. Initial membership fee $6...new members will

receive 6 programs from the group master library, free subscription to the GILA NEWSLETTER, participate in education seminars, & benefit from group discounts."

PET USERS GROUP KC & I (Kansas City & Independence MO): Contact Rick West at Kansas City Computers, 5214 Blue Ridge Blvd., Kansas City 44133. Meets 7-10pm first Wednesday each month at Blue Valley Federal Savings & Loan, Independence MO.

ROCKFORD (IL) AREA PET USERS GROUP: Contact Mark Niggemann, 912 St. Andrew's Way, Rockford IL 61107. General interest group specializing in anything we can. Group has over 50 members of which maybe 1/3 show up at each meeting. MN is temporary president of this group, working hard to increase membership. Meetings are held every 2nd Thursday each month at Rock Valley College, Building 2, Room 228. For info or trade of non-copyrighted software, send SASE to address given above.-MN

SCOPE, Dallas TX: For your files, the SCOPE PET User Group has about 40 members, although I send out about 50 announcements each month. It meets once a month on the second Sat. [unless space pre-empted by another group & moved to the third Sat.] from 11:30 AM to 1:30 PM. President is Don Kassbaum, Vice President is Bill Knight, Treasurer is Dennis Allen, Secretary/Newsletter Editor is Sam Cook. A new set of officers will be elected shortly. Members come from the Dallas-Fort Worth area: most from North Dallas, some from as far north as Greenville, & several teachers from Irving which has recently acquired about 20 PETs for their elementary schools. Some of the members have VICs; most have Pets or CBMs. Quarterly, we have a software exchange of non-copyrighted programs. Other meetings we have a lecture or demonstration. New developments are discussed. We need more public domain software programs for club distribution. Lately, due to tight finances, we have been meeting in rooms available at no charge: the Jaycees park building in Irving, & at the Texas Power & Light meeting room in Richardson. We have tried to assist the teachers in Irving program some useful things on their PETs.-Sam Cook

ANOTHER USER GROUP? FOR PEDISK OWNERS:

Yes! I would like to start a user group/column for all the owners of PEDISK II systems for the purpose of exchanging ideas. Have you written any programs that use the PEDISK II ? Any interesting applications? Would you like to share them with others? If so, drop me a line at CIPUG, so that we can get together with our ideas. JOH has kindly got the ball rolling with a few programs that includes menus (even for light pens!) & various other utilities. PEDISK versions for the MAE assembler & PAPERMATE word processor are also reviewed in this issue [See under Utilities & Business Reviews]. Did you know WORDPRO (tm) will be available soon for your system? Next issue we'll try to include a program in this section. ATUG disks are now available for PEDISK II's at the same ATUG price. If you are interested in these, contact JO at CIPUG address for further information. Let me hear from you!-JO

ANYONE LOOKING FOR A HAMPUG?

Clark Stewart, of 104 Henrietta St., Ravenswood VA 26164 (304/273-4680) is interested in starting a PET user group for AMATEUR RADIO OPERATORS. So far 16 have expressed interest. Meetings will be via radio. Send a self-addressed, stamped envelope to Stewart if interested. [Ed: So far, Steve Case (WA7ETE), Gary Barrell (K40AH) & Gary Plunkett (943 E. Cleveland, Decatur IL 62521) have PETs & ham radios. Try contacting them, too!]

BUSINESS REVIEWS

COMPUTER HOUSE DIVISION PROGRAMS, from F.L.C., Inc. Requires Upgrade or 4.Ø BASIC & CBM disk. Kilobaud gave me these programs for review & then decided not to print the resulting opinions, because they don't print very unfavorable reviews. I have never seen programs of so little distinctive value protected so heavily! If you must buy them, limit yourself to technical programs with no commercial equivalents, such as BOLT CIRCLE 2.Ø, SPUR GEAR, TANK THICKNESS, & TRIG/CIR/TAN X&Y. The other dozen programs checked are less capable/reliable than other commercial/public domain programs, & impossible for most users to modify for special needs. Some can't even be run on new equipment. NOT recommended.-JS

PAPERMATE (PEDISK version), $6Ø from AB Computers, a Microtech dealer or Microtech direct. Full feature word processor now available for PEDISK II (v4 up), converted by Bob Freeman of AB Computers.-JO

COMMUNICATION SYSTEMS REVIEWS

ABBS GAMEMASTER is a 'dial up' computer system featuring games & other services. Requires MODEM. Fee is $75 for FULL membership (includes 8 hrs. system time & 5 mos. mailbox), or $1Ø for ALA-CARTE membership (time & mailbox bought as needed). Time costs $2-$3/hour. I've had it for a week & think it's GREAT.-JOH.

The SOURCE. (Review #1 in M#3 was negative, #2 in M#4 was positive. So, here's the tie-breaker, review #3.)

If you are thinking about buying a modem, or already have one, reconsider the source, lately they have many sources of information for PET/CBM/VIC users, provided by both Commodore and the Source Pet Users Group. [From what JOH reports, you can find Commodore staffers to chat with on the Source most anytime.-JS]

If you are already a member, try the following at command level:

```
>BASIC (12)CL2505>READ
>BASIC (12)TCY946>READ
>CBM
>POST READ CBM/PET-COMPUTERS.
```

HERE are some useful MODEM NUMBERS for MIDNITE READERS (either free bulletin boards, to reach CIPUG members, or all PET):

ABBS GAMEMASTER, Chicago IL	312/475-4884	(24 hrs.)
BULLET-8Ø, Springfield IL	217/529-1113	
NET-WORKS C.A.M.S., Decatur IL	217/429-5541	
PETBBS#2, Milwaukee WI	414/282-8118	
PETBBS#1, Ypsilanti MI	313/484-Ø732	
PunterBBS, Toronto ONTARIO	416/624-5431	

EDUCATION REVIEWS

MINDSTRETCHER SERIES, $2Ø/each of 5 program sets from Island Software. Protected. These 5 program sets are meant for gifted & talented upper elementary students (grades 3-6), but seem to fascinate all ages. Are NOT drill & practice, but help develop critical thinking & problem solving. Each set includes 2 programs; potential buyers should not be put off by stange names like Welter, or Black/Kayles. Excellent use of PET graphics made throughout ALL programs. 1 program does 2-dimensional representation of Rubik's cube, another has students try to beat each other or PET at a game similar in strategy to NIM but with great

graphics while another has devilishly clever jigsaw puzzles. Programs are protected but the reasonable price hardly makes this a problem. All problem tapes are promptly replaced. Several sheets of background & teaching suggestions comes with each program. A BEST BUY for everyone.-Ralph Bressler

FIRMWARE REVIEWS

ARROW, $60 from DataCap. 2K EPROM machine-language utility program. Requires BASIC 2.0 or 4.0 (40- or 80-col. screens). Adds 10 great features to Commodore operating system: 6 commands using (new) CN2 cassette deck (3600 baud high speed save, load, verify, append; read/write data block access; 1-9 blocks of tape positioning), fast repeat key function (15 times/sec.), flip (graphic/text) character set, hexadecimal/decimal calculator (up to decimal 65,535), & quadruple density (80x50 or 160x50) plotting outside any screen text. When purchased, documentation was lacking in some areas, but Milt Bathurst has taken care of that in his new instruction sheet. (See also comments on high speed save under DEALERS.) I would recommend ARROW to anyone. If you're forced to use cassette drive, then 6 commands will be the most useful. Also works well with PROGRAMMER'S TOOLKIT.-Pete Vandrew, 135 Cochran, Manhattan IL 60442-0374

MIKRO-Chip based ASSEMBLER, $80 from Skyles Electric Works. Assembler chip Skyles imported from England. I now use it for all SHORT assembly jobs, which most of mine are. You must weigh convenience of using a SYS to have assembler present against its price. Can write assembly just like you would BASIC, giving full use of PET's screen editor. Compatible with COMMAND-O, which can be used for editing. Only 3 commands: 1 gives formatted listing to screen, another does assembly, & last does base conversion. Assembly may be listed to printer; all standard mnemonics & addressing used. Good documentation; points out some GOTCHA's. Biggest aggravation: allows BASIC to tokenize your source code, so that standard labels like CHRGET cannot be used, since parts of them are changed to tokens.-Ralph Bressler

GAME REVIEWS

ASTEROIDZ, $10 from ComputerMat. Arcade-type game patterned after asteroids. 4 skill levels. Uses machine lang. for fast graphics & good sound effects. Game is fun and challenging, but differs some from original asteroids. GOOD.-JOH.

REVIEW#2: With acceleration. Asteroids fly across wrap-around screen. If you hit one, only dents it (not break up). Since game only keeps track of 3 missiles at a time, erases 1st one if you fire 4th time. If used to real thing, you'll be disappointed.-JP

REVIEW#3: Good use of graphics. In BASIC with some ML subroutines. SLOW action, especially at level 4. Poor structure & self-modifying code. Poor.-MN

MUNCHMAN, $10 from ComputerMat. Variation of PACMAN arcade game. Good PET graphics & excellent sound effects, but action TOO SLOW for some. Object: 'eat' all dots while avoiding Zip & Zap (2 computer foes). Good game for children.-JOH.

REVIEW#2: 2 Munchmen search for you in a maze, one horizontally, other vertically. In BASIC & ML with sound, but extremely slow, yet still challenging & addictive. No fruit (bonus points) as in PAC-MAN(tm). Not bad for $10.-JP

REVIEW#3: Has self-modifying code (hard to make backup copy). Needs slight change to work on FAT 40. Being a regular player of arcades PACMAN, I think this program is not well written. Poor structure. Not recommended!-MN

SARGON II, from Hayden Books. User Fritz Schäfer reports this is available in

Europe; write him for more info. First, a bit of history; Programma International, a subsidiary of Hayden paid a HUGE price for the rights to Sargon a couple of years ago. They released the Apple II version, intended a PET version, but then went belly up. In the process, they took me for quite a ride regarding my Subsort program. Hayden never reimbursed me a dime.

Now for the review: I set up Sargon to play the prior PET Chess King, MICROCHESS. With Sargon at level Ø of 6 & Microchess at 8 out of 8, they played about evenly. When Sargon was raised to level 1, it wiped Microchess out in very short order. Level 6 apparently takes forever to play, but that presumes someone who can beat it at lower levels. The graphics are excellent, the game is very eay to play, & all it lacks is Microchess's clock. Highly recommended.-JS

HAL Game Reviews, by John O'Hare

Each of the following games are $20-25, from Systems Formulate. All for Upgrade BASIC 2.Ø, require HAL65ØØ programmable character generator, & use high-resolution graphics & sound effects. Request exact prices.-JOH

MOLE ATTACK. Smash invading moles on the head with a hammer, but you'll lose points if you hit a bomb by mistake!

NIGHT DRIVER. Unseen, but if it's as good as others, you can't go wrong!

PACKMAN. Excellent game, JUST like arcade version, right down to the sound effects. One of the Best!

RALLY-X. Arcade type game where you must steer your car thru a maze (of which only a portion is shown on the screen) scoring points while running over flags, but watch out for enemy cars and rocks! Also has 'radar' display which shows general locations of Flags, Enemy Cars, & your car.

SUPER GALAXIANS. Another fantastic game, just like arcade version in which you try to fight off the dive-bombing invaders with your 'Galaxip' ships.

ULTRA INVADERS. Best available Space Invaders game for PET, exactly like the arcade version.

HARDWARE REVIEWS

CBM 8Ø23P, $995. 15Ø cps bi-directional 8 dot matrix printer with logic-seeking (that means FAST! with choice of fair or good print quality.) 15" carriage tractor plus friction-feed printer has it all! Features: overstrike correspondence mode (for GOOD print quality), 16 cpi condensed mode, bit image mode for high-resolution graphics, all PET graphic characters, formatting & commands from earlier CBM printers, plus true descenders in lower case text. Advantages: quiet (compared to earlier models), easy paper/ribbon loading, flip lever to change from friction to tractor-feed. Built-in diagnostics recognize faulty electronics AND blocked carriage, missing paper, or lifted cover. For only $2ØØ more than the 4Ø22, it's no contest! Compared to Epson MX-1ØØ, 8Ø23P is totally PET-compatible, twice as fast, easier to switch from friction to tractor-feed modes, & cheaper (no IEEE interface needed). Disadvantages: normal fast print gives poorer print quality than 4Ø22 & Epson MX-1ØØ, durability unknown, & not likely to match massive, reliable Tally 8Ø24 for continuous business use. But for all lesser uses, definitely recommended!-JS

C2N EXTERNAL CASSETTE UNIT, $75 from Commodore. Replacement for original tape

deck w/o counter. Cream in color with added tape counter. However, there are several problems: first one I bought had an incurable tape head alignment problem; capstan drive on second one would let tape slip every now & then (original PET frequently had same problem). Have heard several others complain about similar problems (mostly VIC owners). If you're planning to buy a new tape deck to replace your old deck w/o counter, have dealer check out the deck first.-MN

ELTEST MSF-2, IEEE-488 to parallel or serial interface, $68 for parallel version, $85 for serial version, from Progress Computers. Test version is parallel, serial version uses same board. Full instructions, including schematics. Seems well designed & manufactured. Parallel connection almost trivial, requiring only standard plug-in cables. Like other reviewed interfaces, takes power from Centronics parallel connector pin 18. Most parallel printers expect this, & supply +5 volts to that pin. No case or switches to control character conversion & device address. (Set now via soldered jumpers as device 7, code correction 'on'.) One great advantage over PIE-C board: can't crack the computer's main board with this one!

Vitals on untested serial version: 300 baud, mark parity & 1 stop bit are standard. Changing parity requires changing a couple of minor components. Baud rate change takes 2 new components, & an oscilloscope or CMC's baud rate tester program. Serial version cannot halt output when print buffer fills, but has a 400 millisecond delay for carriage return. Output levels are true RS232, but you supply +5, +12 & -12 voltages. (CMC's SADI interface uses only +5 volts, fudging the standard, but cutting costs.) In short, if you or a friend can solder, the ELTEST boards may save $50 or more. But you make the modifications. Of the 2 offered, I'd recommend parallel version.-JS

"The EXECOM 80 char. board you see advertised in COMPUTE! & MICRO is real. I have one of the first shipped. It seems to be a quality product, if not first class, then it is running a very close second."-Tim Tremmel.

GRAPHIC-80 PET, a "Fat 4016" upgraded to 32K & 80 columns. I love the price, 32K, BASIC4 disk commands & faster garbage collect, 80 col. screen for word processing & editing programs, built-in sound, expansion ROM sockets, graphic keyboard & repeat keys. Negs: having to use keypad decimal point for period, not (yet!) having 8032 special ESCAPE & TAB keys, & the hassle getting old programs (esp. with screen memory POKEs) to work on the screen.-BA.

HAL 6500 PROGRAMMABLE CHARACTER GENERATOR, $180 from Systems Formulate Co. Upgrade BASIC 2. You redefine 64 PETS characters. Great for designing custom character sets for games, mathematical symbols, foreign character sets, etc. Includes built in CB2 sound effects (improved to eliminate 'noise'), & totally powered by the PET. Comes with 2 tapes: #1 contains very good demo of the Hal's capabilities, & set of programs to help design characters: #2 contains Super Slot Machine game--the BEST slot machine game I've seen on PET (uses hi-res graphics & great sound effects!). Only disadvantage: you lose upper case when in upper/lower case mode, but hardware fix given; can also fix using a program to load in original character set (not supplied). Also available: 6 other GREAT games (see under game reviews). Highly recommended.-JOH.

HESCOM, $49.95 from Human Engineered Software. Cable to connect VIC & PET user ports plus 2 ML routines that sit in high memory in each machine. Requires PET & VIC. Includes demo program. Package comes from same company that produced excellent HESBAL assembler package. Another triumph of clear, concise programming & excellent documentation. You can transfer program or any memory block from VIC-PET or PET-VIC, almost without a pause. Can also allow PET to use VIC's music or joystick capability. 2 machine games also explained. Package

definitely has some real potential. Ability to store VIC programs on list & list them on 4022 printer is nice. Its usefulness may decline as more VIC peripherals hit the market. Documentation should serve as a model for entire PET software field.-Ralph Bressler.

PEDISK II Floppy disk Model 540-1, $595 from CGRS Microtech.

REVIEW#1: Low-cost IBM-compatible drive which plugs directly into $e000 slot with an interface board. Board has its own 2K operating system, which adds commands preceded by ! . Could be used as remote data entry facility for large OBM-compatible facility. Handles program or data files, but 4040 programs will have to be modified for PEDisk (possible in BASIC, but nearly impossible for machine-language programs)). CGRS has popular packages like MAE, Papermate, & Flexfile available to work with their drive. Less expensive than a 4040, even if you buy 2. Its direct memory access avoids IEEE bus & makes it up to 4 times faster thanthe Commodore line. Its incompatibility with 4040/8050/2031 disks may be too much of a problem for some.-Ralph Bressler

REVIEW#2: (1 double-density drive, 143k storage on 5 1/4" disks). System includes: 1 disk drive + housing, logic board, ribbon cable, manual, master diskette containing DOS with monitor. Instruction manual gives step by step instructions on installation & start-up & many clear llustrations on all PEDISK II commands & error message codes. DOS uses 2K from top of BASIC RAM, & operates with 'sys59904' command.

Two modes: DOS & direct mode. Direct mode (BASIC) has all familiar commands, plus extensions, such as !load !save !open !print !input & !run, & linked to your BASIC by the supplied ROM. !run command acts like a SHIFT/RUN, & can chain programs (e.g., !run"invade:0" to load & run INVADERS on drive 0). !list (version 5) lets you view disk contents w/o disrupting programs in memory. DOS monitor includes disk utilities to format disks, compress files, rename files/programs, copy entire disks (even with 1 drive), save machine-language programs with starting & ending addresses plus the execution addresses.

Good points: Since disk loads directly into memory, it's FAST!! (8K program which takes 2 min., 18 secs. to load from cassette loads in less than 2 1/2 secs, & 24k program takes over 7 mins. from tape compared to a PEDISK II load time of 4 secs!) [Vastly faster than CBM disks, too.-JS] Controller board connects up to 3 disks, easy to use, cheaper (by $100) than Commodore's 2031 single disk drive, & excellent support (including phone conversations & now a newsletter). I've had no problems with the disk system (in over 4 mos. use).

Bad points: Will not read CBM disks, takes top 2K (2050 bytes) of your memory (if your program uses this, you'll need to 'sys' to access the disk again), can't use TOOLKIT(tm) ROM with disk, file names are only 6 characters long, & cannot read CGRS quad density disks with the double density system.

For anyone who's been using a tape recorder with their PET/CBM computer, this product is a much needed relief. A disk does to cassettes what keyboards and CRTs did to LEDs & toggle switchs (remember them?). As an alternative to mass data storage devices on the market today, PEDisk II disk system is worth considering. Recommended.-JO

STARWRITER-II, by C. Itoh, around $2,000. Needs a serial or parallel interface to PET. Cost roughly $300 higher than Starwriter-I. Nearly identical to Starwriter printer we've used & loved for the past 9 mos., but nearly twice as fast (45 cps). According to 1 ad, faster overall than a 55 cps NEC Spinwriter. It does run circles around our other Starwriter. Print quality still good, altho fainter. A real bargain if you have the extra $300, & need lengthy printouts. Recommended.-JS

SADI, $290 from CMC. Versatile bidirectional serial & unidirectional parallel interface for PET, but may drive you nuts in daily use. SADI can't just be plugged in & used. First, you must command a baud rate (unless it's 300), &

other information, outside WORD PRO, etc. Once set, SADI is OK until a power failure. Unfortunately, mine was defective, & had to be reset every few hours, to unlock the IEEE bus. (CMC has an unconditional 30 day money-back guarantee.) If you need a powerful interface, SADI is a true 6502 computer, complete with two 6522 VIAs. But if a simple bi-directional RS232 interface is all you need, try the NETWORKs 2000 instead.-JS

Updates on:

2031 SINGLE DISK DRIVE: My 2031 (see M#5) disliked 4040-formatted diskettes, & vice versa. After much checking, trouble was blamed on Shugart SA390 drive. Apparently, Commodore got a batch with bad belts. However, on careful testing, drive was well within specifications, & only a bit off in motor speed. Since testing has to be done in a 2040/4040 drive under DOS 1, I then swapped the 2031 drive with one from my 4040. That cured it! No one at Commodore knows why, unless 4040 has more error correction logic than 2031. If your 2031 gives trouble, especially ID mismatch errors, check belt & motor speed, by inspection, not with test program. If OK & you still have troubles, try another drive. Commodore says 2031 has been quite reliable so far, except for belt problem.-JS

TO CHECK MOTOR SPEED: Turn your disk unit upside-down & watch strobe on bottom of drive under flourescent light while disk drive motor is on. (You may have to remove drive from its cabinet.) If strobe marks stay still, all is well. If not, adjust pot, either on rear of drive or on analog board. If preceding sentence is confusing, leave adjustment to your dealer. Don't just run motor speed test program--it passes some disks that show adjustment needs under strobe.-JS

4022 PRINTER: "A word on using either Wordpro or Wordcraft with the Commodore 4022 printer. If you do an 'open7,4,7:print#7:close7' so that the printer is in upper-lower case mode rather than upper case-graphics mode & load in either Wordpro or Wordcraft to print a document, the results will be in upper case-graphics mode. Before using the wordprocessing software, be sure to reset the printer with 'open10,4,10:print#10:close10 '."-RTBS

MAGAZINE REVIEWS

COMMODORE MAGAZINE, $15 for 6 bimonthly issues from Commodore U.S. Another season, another name for Commodore's magazine, & another editor as well, but finally an improvement. Issue #1 under the new name was fairly decent for beginners, & issue #2, which nearly made it out in the cover month, is quite respectable. If it continues improving at the same rate for a few more issues, they'll really have something. Still mostly for beginners. Advanced users should take Commodore Canada's Transactor. (Midnite #5 made the cover of the current Transactor. Ah Fame! Now, if only we could get a mention in Compute!)

FARM COMPUTER NEWS, $40/yr. from ?? Vastly overpriced, on basis of sample copy received.-Candy Jens

GILA NEWSLETTER, from Las Vegas Area PET Users Group (LVAPUG),4884 Irene Ave, Las Vegas NC 89110. Editor: Gerald Hasty. Free to members. Well-formatted, beautifully illustrated 12-page newsletter with general articles, hints, software news, & descriptions of programs in the club library.-ES

IPUG Newsletter, from Independent PET Users Group, England. Seems to be Users Groups' User Group, along the lines of "International Apple Corp". All PET, & much like Midnight in size, contents, print quality & viewpoint, though pages far

less crowded, & fewer reviews. User-oriented, includes several good programming hints. I'm sure I'd subscribe if I lived there.-JS

Update on MICROCOMPUTER PRINTOUT: See M#4 & 5. No longer only for PET, but still HEAVILY PET-oriented. Lots of fine products that we just don't see this side of the "lake." Magazine was recently available for $29 a year to readers of Bob Baker's PETpourie column in Kilobaud (now $58). First issue took a while to come, but arrived in good shape. Good British humour, well-done business & technical articles, some full reviews, & some fine brief programming hints.-JS

TORPET, $1 per issue, or free to TPUG members (bimonthly or quarterly now?). If you like Midnite, you'll LOVE TORPET! Official newsletter of Toronto (Ontario) PET User's Group includes "Butterfield Box" for beginners, "BASIC Box" & many good programming articles, hints, full & comparison reviews, printed documentation for large TPUG programs &...the next to latest Midnite. Print quality improves with each issue. Apply for "associate membership" to receive it. [Note: this is a biased review...]-ES

UTILITIES REVIEWS

DTL BASIC, $350 from CMD Ltd. Complete PET BASIC compiler. Requires 32K & CBM disk to compile. Object files run on any PET with adequate memory to hold program & same set of BASIC ROMs. Requires cassette port dongle. Compiled programs require $50 "run-time" dongle.

It's the program I've been wanting desperately for 3 years! Congratulations, authors, for developing most significant PET program since WORD PRO! Thanks also, CMD, for bringing it to North Amer. users at 1/3 overseas cost. Have you wanted speed, compactness, & protection of machine-language programs, but been unable to handle assembly-language? Have you been using assembly-language, but cursing the time it takes to do even the simplest machine-language program? If so, you need a compiler. But not just any compiler. Those offered before handle a very small subset of BASIC, with many new rules/restrictions. In effect, you had to write each program within the compiler's limits. Compiling existing programs was more work than rewriting from scratch. No more!

Unlike any previous PET program, DTL BASIC is a complete compiler, for anything in BASIC 2.0 or 4.0, so long as the source program: 1) is in BASIC (i.e., no attached machine-language before or after program text); 2) has no POKEs modifying program text as it runs; & 3) doesn't preserve variables while chaining among program modules. BASIC statements seem to execute 20 times faster with integer variables, & at least twice as fast with real number variables. Compilation itself runs at 1-2 lines of source text/sec. An in-memory compiler might run faster, but couldn't handle large programs that benefit most from being compiled. Includes simple commands for changing some or all program variables to integers, during compilation, for maximum speed; extensive error-trapping with very adequate warning messages; & facility for redoing a compile process after a faulty try. Like CALC & TCL Pascal, DTL BASIC attaches 4K block run-time module to each program to keep most programs from ending up shorter overall after compilation. However, object portion is at least 20% more compact than before, so largest programs do end up shorter.

Examples: After a full day with CALC (best of the near-compilers), I failed to write even a simple question/answer routine. After 4 hours with DTL BASIC, I compiled my largest program, plus 3 smaller programs. All now run vastly faster. Baker's COMPACTOR (below) takes 18 min. to squish itself (or 11 minutes if squished version does the squishing), while compiled version takes under 4 min.! Commodore's DISPLAY TRACK & SECTOR, normally too slow to use, now updates displays in a few secs. MAZE PRINTER used to take 10 min. to think up a 17x34 maze, but now does it in 25 secs. Commodore U.S. may soon sell PETSPEED, a

competing compiler, with rumors of other compilers from Germany & elsewhere. Meanwhile, DTL BASIC is works well. Highly recommended!-JS

FILEMASTER II, from Software by Sasso. This update on a very capable disk utility program adds much faster directory read routine. For 8050 user, also adds idiot light flasher routine, to show you when & which drive to feed diskettes. Unfortunately, same nice routine also sends 4040 drive out to lunch. Presumably will do same to any DOS 3.0 drive, when that upgrade is released. Since program auto-starts from disk, disables STOP key while running, & RESETs PET when done, is hard to disable flasher routine. Very smooth, powerful, & user-proof for those with 8050 drives. But if you use 2040 or 4040, request old, slower (but still good) version for all CBM disks.-JS

FULLFORTH+, $75 from IDPC. Excellent implementation of FORTH, in its 5th version, & best I've seen on PET. Supports all FORTH structures & FIG standards. Many added enhancements to handle special PET & PET peripheral features. Upgrades offered for just postage & handling costs. Many significant improvements might qualify it as new product. Maintains program compatibility between versions. Company support includes HOTLINE, excellent newsletter with tips, new user structures & screens. Compiler addition means FORTH programs can be run w/o fullFORTH system present. Package would be excellent value at twice the price. Advantage over Bill Seiler's version is the company's support.-Ralph Bressler

MAE (PEDISK VERSION), $170 from Eastern House Software. Version of MAE (Macro Assembler Editor) for PET owners with a CGRS PEDisk system. See M#1 & 3 for reviews of CBM disk versions. By far the best assembler available for PET; even includes a Word-Processor. Works very well with PEDisk system; commands include PUT a file, GET a file, KILL a file, & assemble in modules from disk. Highly recommended.-JOH

MASSAGE 8050, by SBS & free from Commodore. 8050 version of Massage 2040 package reviewed in M#2 (price later reduced). This badly-needed utility helps user or dealer try to repair faulty disk data. Like PET's built-in machine-language monitor, it's not for beginners, but in proper hands, can restore priceless lost data. Commodore U.S. bought program to supposedly add it to 8050 system disk packed with each drive. One reason you may not have seen it yet is that in other hands, it can bypass many protection schemes, including one used by Filemaster II above. If that's the reason for the delay, Commodore may as well release it, as similar programs are becoming available now. Until it makes the system disk, have your dealer contact Commodore for your copy.-JS

MENU, $39.95 from SBS. Requires 80 col. display. "Hello" program intended to be first one on diskette, loaded with shifted RUN key. Displays a well-done directory, then loads & runs program you select. Ideal for those unable to handle disk commands in immediate mode.-JS

ROBERT BAKER PROGRAM COLLECTION, $29 (later $39) from Baker Enterprises. Some 40 programs collected, with full documentation, on two 4040 or one 8050 diskettes. Appears to include Baker's entire commercial software catalog of routines from his "PETpourie" column in Kilobaud plus longer ones (e.g., DISK MASTER) that he used to sell separately. Many programs previously reviewed, (M#2). Well-written & well-explained. Amazingly low-cost way to start library of useful programs, plus 2-3 games. $29 price is only for Midnite readers (Visa & Mastercard accepted) until selling arrangements with major software house are complete. My favorites: COMPACTOR (squishes BASIC programs tighter than my own similar utility); UNCOMPACTOR (unsquishes squished programs); & XREF (lists all variables used BEFORE program is run, whereas TOOLKIT, POWER, etc., only list variables

already used during program run.) Highly recommended.-JS

SCROLLING PROGRAM, $6 from Eastern House Software. Versions for all models. (See related AD.) Scrolls thru BASIC program listings by simply holding down CURSOR UP or CURSOR DOWN keys. Hitting DELETE moves cursor to blank line at bottom of screen to ease program changes. Well-done REPEAT function on all keys. Unlike many REPEAT routines, not affected by LOAD & SAVE commands. Sits in 1K of high memory. Cooperates with ROM software, if called before SCROLL, & with DOS Wedges, so long as they are run after SCROLL. A bargain.-JS

VIC SOFTWARE REVIEWS
by John O'Hare & M. Niggeman

AMOK, $18.95 from United Microware Industries. Best game for VIC-20 I've seen so far. Excellent graphics, very fast, has 9 difficulty settings. ATARI(tm) type joystick essential, but can be played from the keyboard. My only complaint is occasionally being shot by a robot that I just destroyed, but this is a minor fault. Highly recommended!-RTBS

REVIEW #2: Similar to the Arcade game BEZERK; fight your way thru robot infested rooms armed only with your laser gun. Good game, but not as good as some of the cartridges being released by Commodore & UMI.-JOH

ALIEN BLITZ, $25 from UMI. BEST space invaders game I've seen in 3.5K RAM VIC. Smooth graphics exactly like arcade, including UFO's! Recommended.-JOH

ARTILLERY, $10 from ComputerMat. Target game in which two players try to destroy each other by firing cannon shots over a computer generated mountain. Includes sound & color graphics. Good fun for 2.-JOH.

BLACKJACK, $10 from COMMODORE. Most complete version of '21' for a micro I've ever played. Plays by Las Vegas casino rules. Fair use of graphics. Minor bug causes a syntax error whenever you double, but easy to fix. If you love to play '21', this one is for you. Good.-MN

CATTLE ROUNDUP, $10 from ComputerMat. Object is to return 1 to 8 'cows' back to their pen before time runs out. Variety of options, from pushing to coaxing to help you capture the beasts. Fun, but becomes frustrating after a while. Fun for kids.-JOH

GUARDIAN, $10 from Hal Labs. Patterned after DEFENDER arcade game. Requires joystick. Even includes scrolling landscape as enemy ships zip by your spaceship. Another well done game from Hal Labs.-JOH.

METEORS, $10 from Hal Labs. Almost like ASTEROIDS arcade game. Requires standard atari joystick. Everything uses re-defined, FAST hi-res graphics. A must for all asteroids fans.-JOH

MUSIC MACHINE, $6 from PETTED. Music editor program. You write, play, load, & save music in 3 possible voices. Major flaws: Inputting music is very difficult, & you can't play music in all 3 voices at once. Poor.-MN

STAR WARS, $17 from UMI. Similar to STARFIRE arcade game. Kill as many T.I.E. fighters as you can in the time given. Several difficulty levels. I couldn't even shoot down 1 fighter at level 1; fighter movements are too random & don't shoot back at you. Could have used HI-RES graphics.-MN

VIC-MAN, $15 from PETTED. Arcade style game similar to PACMAN. Protected.

Mostly machine language, HI-RES color graphics, nice use of sound effects. Joystick option-$2 extra. 3 levels of difficulty. Monsters are normally smiling, but frown when you eat an energy dot, making it possible to play on a B/W TV. Nice addition to anyone's library. Recommended.-MN

VIC MONITOR,$7 from PETTED. Machine-language monitor written in BASIC. Very slow. Can only dump memory, enter code & execute it. No register display or load/save routines. Wait until Commodore's monitor comes out. Poor.-MN

VIC PROGRAM PACK #2, $24.95 from PETTED. Includes MONKS, MEMORY, & BLACKJACK. Protected. Absolutely worthless. None of the games are original in concept. Commodore's BLACKJACK is 10 times better than this one. Not recommended.-MN

(Editor:Oh well, there goes another potential advertiser...-JS)

VICVADER, $10 from Hal Labs. Needs joystick. Space Invaders game for VIC is one of the best VIC games I've seen so far. Uses great sound effects & has HI-RES invaders in color! Great.-JOH

VIC CARTRIDGES

JUPITER LANDER, $30 from Commodore. Very similar to "Moonlander". Excellent use of HI-RES & good sound effects. Uses function keys to control thrust. No joystick provision. I crashed several times running out of fuel. Very impressive. Highly recommended.-MN

REVIEW#2: Commodore's variation of LUNAR LANDER arcade game: you are given 3 spots to land (harder spots earn more points), & fuel. Object is to land your Jupiter Lander as many times as possible before running out of fuel. Enlarged view of each landing spot given when you get within a certain distance, & must land as softly as possible to earn points & extra fuel. Recommended.-JOH

ATUG NOTES
by Brent Anderson

How about this! I actually have something for the Midnite & also on time. Because of recent programs you users sent, ATUG has a NET gain of 3 official diskettes. Also note Punter's terminal programs on the UE disk as promised in Midnite a while back. Likewise, I wrote a BASIC 4.0 version of ASM/TED for disk with a guide for new ASM/TED commands & for editing MAE files to work with it.

ATUG GENERAL INFORMATION:

ASM/TED Users Group (ATUG), started by JS, promotes good assembly-language programming. We manage a DISKETTE (DOS 2.0) exchange library specializing in source files for Carl Moser's MAE & ASM/TED assemblers (PET versions). PLEASE DONATE GOOD MACHINE LANGUAGE ROUTINES, free of copyright, & PREFERABLY in assembler source form. JS's "Unassembler" program converts object program files into MAE source files (See 3/81 MICRO; also available on our exchange diskettes.) We also accept good object programs & utilities.

To get ASM/TED COMPATIBLE WITH MAE disk files, request diskette "Campbell#2." SPECIFY UPGRADE or 4.0 BASIC & include proof of ASM/TED purchase, such as the serial # on the manual. (WILL INCLUDE guide to new features & editing MAE-files to work with ASM/TED for disk.)

11 OFFICIAL ATUG DISKS AS OF 12/81: UA FOR MAE source files; UB for BASIC & object files; UC for Copyright-restricted files (*must buy COMPUTE & MICRO regularly*); UD for program documentation in Wordpro3/4 format. UE is more MAE

source files now PLUS Steve Punter's Terminal Programs. UF is very complete FORTH by Seiler. UG is 6502 source & instructions for FORTH.

UH is mostly source/object (with guide) for latest BASIC AID (aids edit/debug BASIC). One may assemble BAID for 4.0 or Upgrade BASIC, 40 or 80 column screen, graphic or business keyboard, ASCII or CBM printer. Variation POWER-AID works in tandem with Templeton's POWER (from Personal Software). UM has Bennett's very sophisticated mail list program, enhanced/instructed by Strasma: 2.0 version works on upgrade BASIC; 4040 version works with BASIC 4 using relative files.

(UK) koch utilities: src from Hans Koch (Ger.), trans by B. Anderson

label.2001,3001	mae-labels for Old ROM, Upgrade ROM;
label.4001,8001	basic 4.0/40 col; basic 4.0/80 col
unassembler	updated vrsn w/ labels as above.
autoload.asm	load/execute '.' routines at reserved memory
dump.asm	dumps variables & arrays
find.asm	similar to toolkit find
help.asm	similar to toolkit help
hex.asm	hex to decimal conversion or dec to hex
list.asm	special basic-list for adcomp-x80-sp printer
page.asm	see special mem-page, serviced from interrupt
reverse.asm	reverse screen
uhr.asm	time (interrupt-driven) at upper right screen
exec.asm	execute seq file as commands (merge, batch s/r's)
autoload	assembled example of autoload
.dump	.dump assembled
.find--.exec	.find, etc. assembled
screen-editor	updated vers of CBM's screen-input for 8032
inst/keyb	instring & keyboard together
editor.ctl-m03	src files for CBM screen-input
instring.asm	instring routine: sys in,a$,b$,c,d
keyboard.asm	Special graphic chrs for 8032
schlaf gut papa	'sleep well papa', from Koch's 2 yr old daughter
speech.asm	Digital speech recording & playback, source
day of week	convert dd/mm/yy to day of week (BASIC)

UX is source/object code (with guide) for Micromon & Micromon Addition's latest extensions to machine language monitor in UPGRADE & 4.0 BASIC PETs (updates 12/81 COMPUTE!) Now supports additional ONE CHARACTER commands: change character sets; hex, decimal, binary, & ASCII conversions; hex addition & subtraction; calculate branch; checksum; exit to original monitor or BASIC with Micromon disabled; printer disassembly or memory dump; show load address; load from disk; PRINTER ON/OFF; send to PROM programmer; SPECIFY LOAD ADDRESS; text/graphics flip; dos support commands; control characters for 8032 special features.

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VIC NOTES
by John O'Hare

To load a VIC program without its being automatically relocated by the VIC, type: LOAD "",1,1

If the screen position on your TV seems to be off center when using Commodore's Game Cartridges, the whole screen may be adjusted using the cursor keys.

If you have just finished using a game which uses redefined characters, type POKE 56,30 before loading a new game. This restores the top of memory pointer which may have been altered by the program.

If yours is an early VIC, & you are having RF interference problems, see your dealer for a free 'fix' from Commodore (installation may cost $25).

RESOURCES

AB COMPUTERS 252 Bethlehem Pike, Colmar PA 18915
ATUG, c/o Brent Anderson 200 S. Century, Rantoul IL 61866
BAKER ENTERPRISES 15 Windsor Drive, Atco NJ 08004
CGRS MICROTECH Box 102, Langhorne PA 19407
CONNECTICUT MICRO COMPUTERS 34 Del Mar Dr., Brookfield CT 06804
CANADIAN MICRO DIST.(CMD) 365 Main St.,Milton ONT CAN L9T1P7
COMMODORE U.S. (until April 1982..?) 681 Moore Rd., King of Prussia PA 19406
COMPUTER DEPOT 3515 W. 70th St., Minneapolis MN 55435
COMPUTERMAT Box 1664, Lake Havansu AZ 86403
DATACAP 73 rue du Village, 4545 Feneur BELGIUM
DTACK GROUNDED 1415 E. McFadden, Suite F, Santa Ana CA 92705
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HUH ELECTRONICS 1429 Maple St., San Mateo CA 94402
IDPC Box 11594, Philadelphia PA 19116
ISLAND SOFTWARE Box 300, Lake Grove NY 11755
IPUG(Independent PET Users Gr.),109 York Rd,Farnborough,Hants ENGLAND GU14 6NQ
MATOR 3002 Santa Monica Blvd., Santa Monica CA 90405
MICROCOMPUTER PRINTOUT, Subcriptions: Stuart House, Perrymount Rd., Haywards Heath, West Sussex ENGLAND (Editorials: Box 48, Newbury ENGLAND RG16 0BD)
MICROTEK, INC. 9514 Chespeake Dr., San Diego CA 92123
MIDWEST COMPUTERS c/o Bob Johnson, Manhatten KS)
PET USERS GROUP KC & I,c/o Rick West,5214 Blue Ridge Blvd,Kansas City MO 44133
PETTED MICROSYSTEMS 4265 W. Loomis Rd.,Milwaukee WI 53221
PROGRESS COMPUTERS 7073 Lynnetree Way, Citrus Heights CA 95610
Jim Russo 1421 Pine Valley, Ann Arbor MI 48104
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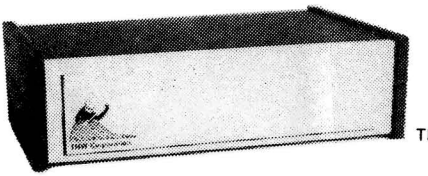

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